REMARKS/ARGUMENTS

Claims 1, 2, 4-7, 10-13, 14-16, and 18-31 remain in this application. Claims 3, 8, 9, 13 and 17 are cancelled by this amendment. Claims 1, 22, 16, 20 and 27 are amended to more distinctly describe the subject matter of applicant's invention and to focus the claims on a single preferred implementation. No new matter is added by these amendments as the amendments are supported by the claims as originally filed.

A. Rejections under 35 U.S.C. 102

Claims 1, 2, 4-7, 10-13, 14-16, 18-21 and 23-31 were rejected under 35 U.S.C. 102 as anticipated by Blumenau (U.S. 6,028,725). This rejection is respectfully traversed.

Independent claim 1, 11, 20, 27 call for, in varying language, methods and systems in which data is replicated such that replicates are on adjacent tracks, or alternatively described as being placed within plus or minus one track of each other. Blumenau teaches that replicates must be placed either on the same track for the embodiment of Fig. 4, or on tracks that are very separate from each other as in the embodiment of Fig. 2. The present invention recognizes that adjacent track seek time is quite small and that the address management benefits achieved by locating replicates on adjacent tracks outweighs the small latency increased caused by the adjacent track seek time.

Although the office action cited column 21 of Blumenau to reject claim 9 as filed, it is not apparent where this portion of the reference shows the claimed feature of using adjacent tracks. At best, Blumenau teaches using widely separated, not adjacent tracks, as is shown in Fig. 2. In fact, Blumenau actually teaches against the use of adjacent tracks in the paragraph bridging columns 6 and 7.

Claims 2, 4-7, 10, 12-13, 14, 15, 18, 19, 21, 23, 24, and 26-31 are allowable for at least the same reasons as the claims from which they depend. Moreover, claim 5 calls for the data storage areas to be formed in separate ones of at least two magnetic recording surfaces and where the data storage areas are substantially equidistantly spaced from each other. The cited portion of Blumenau discusses using separate drives to store the replicate data, something that would make "equidistant" meaningless. Similarly, claims that call for the data storage areas to be on different

4

platters. While Blumenau briefly discusses that a disk drive may comprise multiple platters, the reference states that the original and replicate storage areas are spread across multiple disk drives, not multiple platters within a drive.

For at least these reasons, claims 1, 2, 4-7, 10-13, 14-16, 18-21 and 23-31 are neither anticipated nor made obvious by the relied on reference.

B. Rejections under 35 U.S.C. 103

Claim 22 was rejected under 35 U.S.C. 103 as unpatentable over Blumenau This rejection is respectfully traversed. Claim 22 is believed to distinguish over Blumenau for at least the same reasons as claim 20 from which it depends.

C. Conclusion

In view of all of the above claims 1, 2, 4-7, 10-13, 14-16, and 18-31 are believed to be allowable and the case in condition for allowance which action is respectfully requested. The references that were cited and not relied upon are believed to be no more pertinent that those references that were relied upon.

No fee is believed to be required by this response as determined on the accompanying transmittal letter. Should any other fee be required, please charge Deposit 50-1123. Should any extension of time be required please consider this a petition therefore and charge the required fee to Deposit Account 50-1123. Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned **"Version With Markings To Show Changes Made"**

Respectfully submitted,

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A.   In the Specification:

Please amend the paragraph on page 18 beginning at line 18 by inserting a period at the end as follows:

In Fig. 5A, replicates "A" are located on a common disk surface, either on the same track as shown in FIG. 5A, or preferably on adjacent tracks as shown in Fig. 5B, at radially opposed locations. In other words, the replicates are mirrored about the spin axis 310 at locations 180 degrees from each other. This reduces read latency to about 50% as the disk will need only turn one-half rotation at most to reach any particular data. In other words, the virtual spin speed is 2X the actual spin speed. Although it is possible to use a split track design as shown in FIG. 5A (i.e. a single track containing both replicates), a single split track involves the most work in physical-to-logical mapping by the drive. Sector sparing and error handling are also negatively impacted. Hence, the adjacent track design shown in Fig. 5B is preferred.

B.   In the claims

1   1(Amended).   A rotating data storage disk comprising:
2   a plurality of concentric tracks defined on a disk
3   at least two data storage areas, wherein each area is sized to store a copy of a
4   set of data and the data storage areas are substantially equidistantly spaced from each
5   other and wherein all of the at least two data storage areas are located within plus or
6   minus one track of the same track.

1   3(Cancelled).

1   8(Cancelled).

1   9(Cancelled).

1   11(Amended). A disk drive system comprising:
2   one or more platters, each platter supporting at least one recording surface,
3   wherein the platters are aligned about a common central axis;

4   a plurality of concentric tracks defined on the disk;

5   means for spinning the platters about the common central axis;

6   a recording head associated with each recording surface;

7   an actuator mechanism coupled to each recording head to move the recording

8 head into proximity with selected portions of the recording surface in response to

9 received commands; and

10   at least two replicates of data stored in at least two data storage areas such that

11 any one of the at least two replicates can be accessed to service a data access request

12 and all of the at least two data storage areas are located within plus or minus one track

13 of the same track.

1   13(Cancelled).

1   16(Amended). The disk drive system of claim 11 wherein each recording

2 surface further comprises a plurality of concentric tracks defined on the recording

3 surface and each track is substantially aligned with a corresponding track on an

4 adjacent platter, wherein all of the at least two data storage areas are located on

5 [aligned] adjacent tracks.

1   17(Cancelled).

1   20(Amended). A method for accessing an integral data storage mechanism

2 comprising:

3   receiving an access request;

4   replicating the access request, wherein the replicated access request refers to a

5 track adjacent to a track referred to by the access request;

6   executing at least one of the access request and the replicated access request to

7 a disk media within the data storage mechanism.

1   27(Amended). A disk controller comprising:

2   a command port for receiving disk access commands;

3   a command processor for executing software processes;

4   a first process executing in the command controller for replicating a received

5 disk access request, wherein the first process generates a replicated access request that

6 refers to a track adjacent to a track referred to by the access request;

7

7   a second process executing in the command controller for executing at least

8   one of the received disk access request and replicated disk access request against a

9   disk drive.

8